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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,629	07/20/2001	Jeffrey S. Kuskin	062986.0195	1771

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Baker Botts L.L.P.
Suite 600
2001 Ross Avenue
Dallas, TX 75201-2980

EXAMINER

BRAGDON, REGINALD GLENWOOD

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/910,629

Applicant(s)

KUSKIN, JEFFREY S.

Examiner

Reginald G. Bragdon

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☒ Claim(s) 1-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because in figure 2, "local block" should be --local buffer-- (see page 6, line 21).
2. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1-8 are objected to because of the following informalities:
As per claim 1, line 18, "requestor" should be --requesting node--.

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As per claim 3, line 2, "outside a partitioned group" should be deleted since no "request for the coherent copy outside a partitioned group" is set forth in claim 1.

All dependent claims are objected to as having the same deficiencies as the claims they depend from.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

--or--

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Anderson et al. (6,516,372).

As per claim 9, Anderson et al. teaches, with reference to figure 2, a plurality of routers which link together node controllers. See column 5, lines 6-16. Anderson et al. further teaches that the minimum partition size is a four processor node with a controller, shown at 106 ("a plurality of partitions separating node controllers into at least two partitioned groups"). See column 5, lines 27-40. Anderson et al. teaches performing shared reads ("get message") to memory ("storing") outside of a current (i.e. "requesting") partitions. See column 4, lines 35-37

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(noting that although Anderson et al. teaches prohibits caches executing exclusive reads to memory outside its partition, Anderson et al. does not prohibit shared reads to memory outside its partition).

As per claim 10, Anderson et al. teaches that the memory storing the requested data is outside of the current partition, i.e. in different partitioned groups.

6. Claims 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Brayton et al. (5,623,628).

As per claim 9, Brayton et al. teaches, with reference to figure 3, a plurality of clusters (“plurality of partitions”) interconnected via a system bus 308 (see column 4, lines 50-64), where each includes a cluster manager (“node controller”; see column 9, lines 20-25). Cluster 301 represents a “requesting node controller” and cluster 302 represents a “storing node controller”. Brayton et al. teaches, with reference to figure 23, a read request (“get message”) between the clusters shown in figure 3. See column 37, lines 37-47.

As per claim 10, Brayton et al. shows that the cluster managers are in different clusters (“partitions”), i.e. the “requesting node controller” is the cluster manager in cluster 301 and the “storing node controller” is the cluster manager in cluster 302.

As per claim 11, Brayton et al. teaches that the read request retrieves the latest copy of the cache line, whether it be in main memory (i.e. no modified copies of the line held by any agent on the bus; see column 35, lines 37-51), or with an agent on the system bus 308 (i.e. the agent holds a modified copy; see column 36, lines 14-23).

As per claims 12 and 13, Brayton et al. teaches an embodiment that utilizes a “no read allocate” policy, where each agent on the system bus maintains its cache state for the cache line

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and the processor requesting the data does not intend on keeping a copy of the line. See column 35, lines 56-58 and 61-65, and column 36, lines 50-56. For example, if the line is held in an exclusive state by an agent (see column 35, lines 64-65), then the agent holding the line remains in the exclusive state and the processor requesting the line does not keep the line (i.e. there will be no notification of subsequent changes to the line by the requesting processor since the line was not held by the requesting processor).

As per claim 14, Brayton et al. teaches an embodiment that utilizes a “no read allocate” policy, where if the cache line is held modified by an agent on the bus, then the agent changes state to an exclusive state and the processor requesting the data remains in an invalid state. See column 36, lines 50-56.

Allowable Subject Matter

7. Claims 1-8 are allowable over the prior art of record, but are objected to as set forth above.

Conclusion

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

All “OFFICIAL” patent application related correspondence transmitted by FAX must be directed to the central FAX number at **(703) 872-9306**:

“INFORMAL” or “DRAFT” FAX communications may be sent to the Examiner at **(703) 746-5693**, only after approval by the Examiner.

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Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA., Fourth Floor (receptionist).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reginald G. Bragdon whose telephone number is (703) 305-3823. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM and every other Friday from 7:00 AM to 3:30 PM.

The examiner's supervisor, Mano Padmanabhan, can be reached at (703) 306-2903.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

RGB
June 23, 2004

Reginald G. Bragdon

Reginald G. Bragdon
Primary Patent Examiner
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